

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method of attaching a locator stud on a panel, ~~said locator stud including a shank portion and a flange portion adjacent one end of said locator stud having a diameter greater than said shank portion and a generally radial annular bearing surface between said flange portion and said shank portion,~~ said method comprising the following steps:

forming a locator stud including a shank portion at one end and a solid flange portion at an opposed end integral with and coaxially aligned with said shank portion, said solid flange portion having a diameter greater than said shank portion, a radial annular bearing surface surrounding said shank portion and an end face opposite said radial annular bearing surface;

forming an opening in said panel with said opening having a diameter greater than said flange portion of said locator stud;

inserting said solid flange portion of said locator stud in said panel opening with said radial annular bearing surface projecting through one end of said panel opening and said end face of said solid flange portion projecting through an opposed end of said panel opening;

driving a plunger toward said panel, said plunger including an opening receiving said shank portion, a first annular die surface surrounding said opening of said plunger coaxially aligned with said annular bearing surface, said first annular die surface deforming said annular bearing surface radially outwardly against said panel, and said plunger including [[a]] second projecting annular die surface surrounding said first annular die surface driven against said panel surrounding said panel opening, said projecting second

Att. Docket No. 60,152-1012

annular die surface deforming said panel radially inwardly against an outer concave surface of said flange portion, locking said flange portion in said opening of said panel.

2. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim 1, wherein said solid flange portion of said locator stud includes a radial rim portion adjacent ~~an end of~~ said end face of said flange portion, said method including driving said second annular die surface of said plunger against said panel, deforming said panel radially inwardly against radial rim portion, forming a substantially flush installation of said flange portion of said locator stud in said panel.

3. (Withdrawn) The method of attaching a locator stud on a panel as defined in Claim 1, wherein said radial annular bearing surface of said flange portion of said locator stud is concave and said first annular die surface of said plunger is convex, said method including driving said ~~concave~~ convex first annular die surface of said first annular die surface against said concave surface of said annular bearing surface, deforming said concave surface radially outwardly and forming said outer concave surface of said flange portion overlying a surface of said panel at said panel opening.

4. (Withdrawn) The method of attaching a locator stud on a panel as defined in Claim 3, wherein said flange portion of said locator stud includes a radial rim portion adjacent ~~[[an]]~~ said end face of said flange portion, wherein said method includes driving said second projecting annular die surface of said plunger against said panel, deforming said panel radially inwardly against said radial rim portion.

5. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim 1, wherein said end face of said solid flange portion of said locator stud ~~includes~~is a concave generally conical ~~[[end]]~~ face having a major diameter adjacent an outer surface of said flange portion, said method including driving said concave generally conical end face of said flange portion against a die member, deforming said outer surface of said concave generally conical end face radially outwardly, thereby forming said outer concave surface of said flange portion.

6. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim 5, wherein said die member includes an annular die surface having a diameter greater than said flange portion, said annular die surface of said die member driven against said end face of said flange portion and deforming said panel radially inwardly against said outer concave surface of said flange portion.

7. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim ~~[[1]]~~6, wherein said die member includes a projecting annular die surface having a diameter greater than said flange portion and said second projecting annular die surface of said plunger has a diameter generally equal to said projecting annular die surface of said die member and coaxially aligned therewith, wherein said method includes driving said plunger toward said panel, and driving said end face of said flange portion against said die member, driving said second projecting annular die surface of said plunger against said panel and said panel against said coaxially aligned projecting annular die surface of said die member, thereby deforming coaxially aligned annular depressions into opposed sides of said panel surrounding said flange portion of said locator stud.

Atty. Docket No. 60,152-1012

8. (Withdrawn) The method of attaching a locator stud on a panel as defined in Claim 1, wherein said outer surface of said flange portion is generally cylindrical prior to installation of said locator stud in said panel, and said method including deforming said outer surface of said flange portion into said outer concave surface receiving said panel.

9. (Withdrawn) The method of attaching a locator stud on a panel as defined in Claim 8, wherein said flange portion includes a radial rim portion adjacent an end of said flange portion and said outer concave surface of said flange portion is formed by said second projecting annular die surface and said radial rim portion.

10. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim 1, wherein said solid flange portion includes a radial rim portion adjacent ~~at~~ end ~~said end face~~ of said flange portion and said outer surface of said flange portion ~~includes~~ including a frustoconical outer surface extending from adjacent said radial rim portion radially outwardly having a minor diameter adjacent said radial rim portion, said method including deforming said panel radially inwardly between said radial rim portion and said frustoconical outer surface.

11. (Currently Amended) A method of attaching a locator stud on a panel, ~~said locator stud including a generally cylindrical shank portion and a flange portion integral with and coaxially aligned with said shank portion having a diameter greater than said shank portion and a radial rim portion adjacent one end of said shank portion, and a generally radial annular bearing surface between said shank portion and said flange portion, said method comprising the following steps:~~

forming a locator stud including a cylindrical shank portion at one end and a solid flange portion at an opposed end integral with and coaxially aligned with said shank portion, said solid flange portion having a diameter greater than said shank portion, a radial annular bearing face surrounding said shank portion and a concave generally frustoconical end face opposite said radial annular bearing surface, said conical generally frustoconical end face including a generally conical surface extending inwardly from an outer rim of said end face;

forming an opening in said panel with said opening having a diameter generally greater than said flange portion of said locator stud;

inserting said flange portion of said locator stud in said panel opening with said radial annular bearing surface projecting through one end of said panel opening adjacent a first face of said panel and said concave generally frustoconical end face of said flange portion projecting through an opposed end of said panel opening adjacent a second face of said panel;

driving said outer rim of said concave generally frustoconical surface of said end face of said solid flange portion against a die member, deforming said outer rim radially outwardly against said second face of said panel, entrapping said panel; and

driving a plunger toward said panel including an opening receiving said shank portion of said locator stud ~~and~~ a first annular die surface surrounding said opening of said plunger coaxially aligned with said generally radial annular bearing surface, said first annular die surface deforming said radial annular bearing surface radially outwardly against ~~said first face of said panel, and a second projecting annular die surface surrounding said first annular die surface against said panel surrounding said flange portion, deforming said panel radially inwardly around said radial rim portion and against an outer concave surface of said flange portion, locking said flange portion in said opening in said panel.~~

12. (Withdrawn) The method of attaching a locator stud on a panel as defined in Claim 11, wherein said generally radial annular bearing surface of said flange portion of said locator stud is concave and said first projecting annular die surface of said plunger is convex, said method including driving said convex surface of said first projecting annular surface against said concave surface of said annular bearing surface, deforming said concave surface radially outwardly overlying a surface of said panel at said panel opening.

13. (Currently Amended) The method of attaching a locator stud on a panel as defined in Claim 11, wherein said solid flange portion includes a frustoconical outer surface ~~adjacent said radial rim portion~~ having major diameters adjacent an outer surface of said radial annular bearing surface and said rim portion of said end face and a minor diameter adjacent said radial rim portion, at a midportion of said outer surface, said method including deforming said panel radially inwardly against said frustoconical outer surface of said flange portion, ~~and between said radial rim portion and said frustoconical outer surface.~~

Arty. Docket No. 60,152-1012

14. (Currently Amended) A locator stud and panel assembly, comprising: a locator stud including a generally cylindrical shank portion at one end of said locator stud and a solid radial flange portion integral and coaxially aligned with said shank portion ~~having~~ a concave outer surface at an opposed end of said locator stud, said solid radial flange portion having a diameter greater than said shank portion and including a radial annular bearing surface surrounding said shank portion having an outer rim, a concave generally frustoconical end face having an outer rim, and a concave outer surface having major diameters adjacent said outer rim of said radial annular bearing surface and said outer rim of said concave generally frustoconical end face and a minor diameter adjacent a midportion of said outer surface, and a panel having a thickness generally equal to an axial length of said solid flange portion of said locator stud having an opening therethrough receiving said flange portion of said locator stud and including a convex inner surface deformed into said concave outer surface of said solid flange portion with said flange portion generally flush in said panel and said shank portion projecting from said panel perpendicular to said panel.

15. (Original) The locator stud and panel assembly as defined in Claim 14, wherein said flange portion of said locator stud includes a radial rim portion adjacent an end of said flange portion and said panel is deformed into and around said radial rim portion.

16. (Original) The locator stud and panel assembly as defined in Claim 14, wherein said panel includes a V-shaped annular depression in one surface of said panel surrounding said flange portion.

17. (Original) The locator stud and panel assembly as defined in Claim 14, wherein said panel includes coaxially aligned V-shaped annular depressions formed into opposed surfaces of said panel.

18. (Cancelled)

19. (Currently Amended) The locator stud and panel assembly as defined in Claim 14, wherein said concave outer surface of said flange portion is formed by a radial rim portion adjacent an end of said flange portion and includes frustoconical surfaces adjacent said radial rim portions, ~~having a minor diameter adjacent said radial rim portion.~~

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)